

### **Amendments to the Specification:**

Please replace the paragraphs beginning at page 17, line 11 and ending at page 19, line 3, with the following rewritten paragraphs:

FIGURE 7 is a flow diagram that illustrates invoking of full message mode or callback mode in accordance with principles of the present invention. At step 300, an application 14 gets control over its main thread for the first time since startup of the system. The application 14 will retain this control, indicated by step 302, until the application 14 decides to wait for a message from the middleware services layer. The application 14 will then make a decision 304 whether to wait for the message in callback mode or full message mode. If the decision is callback mode, the application 14 will execute a return statement, which transfers the control of the application thread to the NAC module 232, indicated by 308C. The NAC module 232 will then poll the message queue of this thread for existing messages indicated by 310C. The NAC module 232 will keep polling the queue until a message is found, upon which it will get the message from the queue 312B, convert the message to a callback format 314 and invoke a callback method previously specified by the application 14 in order to handle the message. This completes the loop and the application 14 may again make a decision indicated by 304 as to whether the application 14 will enter callback or full message mode.

If full message mode is chosen, the application 14 has to decide whether to enter in blocking or non-blocking mode, as indicated by 306. The application 14 will do so by requesting a message from the OPA Interface and Handlers module 234 in the middleware services layer. The type of request will also indicate whether the request should be non-blocking or blocking. If a non-blocking request is issued, the request transfers the control of the application thread to the NAC module 232, indicated by 308A. The NAC module 232 will then poll the message queue of this thread for the existence of a message according to the specification of the request. If a matching message is found in step 310A, then this message will be removed from the message

queue (indicated by 312A) and returned to the application 14. If no message is found, the NAC module 232 will return the control of the thread to the application 14 without passing any message. This completes the loop and the application 14 may again make a decision indicated by 304 as to whether the application 14 will enter callback or full message mode.

If full message mode is chosen, the application 14 again has to decide whether to 15 enter in blocking or non-blocking mode, as indicated by 306. As previously described for non-blocking mode, the application 14 will do so by requesting a message from the OPA Interface and Handlers module 234 in the middleware services layer. The type of request will again indicate whether the request should be non-blocking or blocking. If a blocking request is issued, the request transfers the control of the application 14 thread to the NAC, indicated by 308B. The NAC module 232 will then poll the message queue of this thread for the existence of a message according to the specification of the request. If no message is found, the NAC module 232 will continue to poll the message queue for the requested message(s) until one is found or a potential specified timeout period is exceeded. As soon as a matching message is found in step 310B, then this message will be removed from the message queue (indicated by 312A) and returned to the application 14. This completes the loop and the application 14 may again make a decision indicated by 304 as to whether it will enter callback or full message mode.